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## **Construction Begins on Emergency Drought Barrier in Delta**

Temporary Barrier Will Deter Saltwater and Protect Delta Water Quality

SACRAMENTO — The Department of Water Resources (DWR) has begun construction on a temporary emergency drought barrier on West False River in the Sacramento-San Joaquin Delta after receipt of all necessary state and federal permits for the project. The barrier will help block saltwater from flowing into the central Delta and contaminating water supplies for millions of Californians during a fourth consecutive summer of drought.

"California's four-year drought is one of the worst in our recorded history," said DWR Director Mark Cowin. "With 2015 turning out to be warmer and drier than normal, water conservation is crucially important. The rock barrier in the Delta is an undesirable but necessary tool for freshwater conservation."

State and federal water and wildlife officials, working as a Real-Time Drought Operations Management Team, determined that the barrier will help deter the tidal push of saltwater from San Francisco Bay into the central Delta. The approximately 750-foot-wide barrier – essentially a pile of rocks – will span the river but still allow limited water flow upstream and downstream, depending upon tides.

Keeping saltwater from the central Delta is a priority, as a large portion of the state's fresh water for urban and agricultural use goes through this part of the Delta. The barrier would help prevent saltwater contamination of water supplies used by 25 million people who rely on the Delta-based federal and state water projects for at least some of their supplies, including residents of the Delta and Contra Costa, Alameda and Santa Clara counties.

Typically when saltwater threatens to encroach deeper into the Delta, water project operators repel it either by slowing the pumping of water from the Delta or increasing the amount of water flowing into the Delta from upstream reservoirs.

In this fourth year of drought, Delta pumping by the state and federal water projects is already negligible, and it takes three to five days for fresh water released from Lake Oroville or Shasta Lake to reach the Delta. An emergency barrier will provide an additional tool to help limit salinity intrusion should high winds or another unexpected event push salt farther west than expected this summer.

The emergency barrier also will help mitigate a worst-case circumstance this summer in which upstream reservoirs lack sufficient water to meet the minimum outflow requirements to limit Delta salinity intrusion.

The last of the permits was received earlier this week. Among them was a California Endangered Species Act permit from the California Department of Fish and Wildlife, a water quality certification permit from the SWRCB, and U.S. Army Corps of Engineers Section 404/10 permits that comply with the Clean Water and Rivers and Harbors Acts..

In addition, DWR consulted with the U.S. Fish and Wildlife Service and National Marine Fisheries Service on protections for Delta smelt, Chinook salmon and other listed species. All of these agencies have worked cooperatively on the Real-Time Drought Operations Management Team for the past year.

With permits in hand, DWR on May 4 authorized the Dutra Group of San Rafael to begin construction at the site, 0.4 miles from where West False River flows into the San Joaquin River. Installation will last several weeks using basketball-sized rocks transported by barge to the barrier's location between Bradford and Jersey islands. The barrier will be removed by mid-November.

The trapezoid-shaped barrier, about 12 feet wide at the top, will block boat passage on West False River until its removal and will be marked by warning signs, lights and buoys. DWR notified marinas and individuals in the Delta about these restrictions. Alternative routes between the San Joaquin River and interior Delta, including Bethel Island marinas, are available (see attached map).

Emergency barrier removal will finish no later than mid-November to avoid the traditional flood season and potential harm to migratory fish. Removal is expected to take 45 to 60 days.

Design, installation, monitoring and mitigation are estimated to cost roughly \$22 million; the cost for removal is set at \$18 million. Costs are to be paid with a mix of funding from Proposition 50, a \$3.4 billion water bond approved by voters in November 2002, and General Fund dollars.

## **Earlier Consideration of Emergency Barriers**

The West False River site raises fewer concerns for threatened and endangered fish than other potential barrier sites considered by DWR. Last year, DWR studied the potential impacts of potential temporary barriers at three locations: Steamboat Slough, Sutter Slough and West False River. The analysis found anticipated impacts could be mitigated to a less-than-significant level. DWR received and reviewed considerable public comments on the Initial Study and Proposed Mitigated Negative Declaration, available here. DWR is not pursuing installation of temporary emergency barriers at Sutter Slough or Steamboat Slough in 2015.

The April 1, 2015 Executive Order by Governor Brown helped expedite installation of the West False River barrier in time to address emergency drought conditions this year. DWR last used emergency drought barriers to reduce salinity intrusion in 1976-77. DWR considered the installation of emergency drought barriers in 2014 but determined in late May of last year that they would not be needed, in part because February and March storms improved water supply conditions. Planning for future emergency drought barriers continued after last year's decision, with a focus on West False River, Steamboat Slough and Sutter Slough.

Earlier this year, based on the input of Delta residents, the Department also considered the feasibility and effectiveness of barriers on Miner Slough in the western Delta and on Steamboat Slough downstream of its confluence with Sutter Slough.

Emergency drought barriers on Miner Slough and Steamboat Sloughs were eliminated from consideration because of U.S. Fish and Wildlife Service concerns about potential effects on threatened Delta smelt.

## **Current Drought Emergency**

The three-year period from 2012 through 2014 was the driest three-year period on record in California, and 2015 opened with the driest January in the state's recorded history. The Sierra Nevada snowpack typically peaks by April 1; this year, the snowpack was measured at five percent of historic average on April 1, the lowest measurement in recorded history.

Governor Brown declared a drought State of Emergency on January 17, 2014 and directed state officials to take all necessary actions to prepare for water shortages. The State Water Resources Control Board on March 17, 2015 announced new restrictions on water use, including limiting outdoor watering to two days per week and prohibiting lawn watering during rainfall and during the next two days.

In April, Governor Brown directed the State Water Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent. On May 5, the State Water Board established water conservation standards for communities throughout the state, ranging from a low of 4 percent to 36 percent as compared with a community's 2013 water use and depending on per capita water use in each community.

To learn about all the actions the state has taken to manage our water system and cope with the impacts of the drought, visit Drought.CA.Gov.

Every Californian should take steps to conserve water. Find out how at <a href="SaveOurWater.com">SaveOurWater.com</a>.

Conservation – the wise, sparing use of water – remains California's most reliable drought management tool. Each individual act of conservation, such as letting the lawn go brown or replacing a washer in a faucet to stop a leak, makes a difference over time.

Information on DWR's website about emergency drought barriers is available here.

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The Department of Water Resources operates and maintains the State Water Project, provides dam safety and flood management and inspection services, assists local water districts in water management and water conservation planning, and plans for future statewide water needs.



## Boating Detours around Emergency Drought Barrier

Travel Time Estimates - South Delta (Discovery Bay to San Joaquin River) Travel Time Estimates - entral Delta (Bethel Island to San Joaquin River)

- A Route for large-mast vessels: 40 to 45 minutes from Discovery Bay north to Old River keeping right at Frank's Tract going north up to the San Joaquin River (Deep Water Channel)
- B Route for smaller vessels: 40-50 minutes from Discovery Bay north to Old River, west to Sand Mound Slough, west on Dutch Slough towards the San Joaquin River past Big Break (see note).

- 30 minutes from Taylor Slough or Piper Slough marinas north towards False River and north up Fishermans Cut.
- 30-40 minutes from Bethel Island marinas south to Sand Mound Slough, west on Dutch Slough towards the San Joaquin River past Big Break (see note).

Note: Maintain course as far north as possible in main channel of Dutch Slough going past Big Break. 5 mile-per-hour limit on both Sand Mound Slough and Dutch Slough.

Detours identified are subject to changes in natural flow conditions which are beyond the control of California Department of Water Resources.

